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TITLE: Markers of Breast Cancer Risk in Women with Benign Breast Disease

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<p>Although certain risk factors for breast cancer, such as never having giving birth, have been established, the biologic mechanisms by which these factors increase the risk of breast cancer is not well understood. Several of the possible mechanisms can be measured in breast tissue. One measure is the rate that breast cells replicate, which increases the chance of the genetic errors that cause cancer. Another measure is the organization of breast tissue into structures, which "mature" during a pregnancy and have less cell turnover. To conduct studies to determine if these measures are related to future risk of breast cancer, normal breast tissue is needed that has been collected years before diagnosis among women with breast cancer. The aim of this pilot project is to establish a breast tissue repository that can be used in future studies of markers of breast cancer risk in normal breast tissue. To do this we will identify and retrieve the tissue specimens from women who are members of Group Health Cooperative (GHC) who underwent excisional breast biopsy with benign findings between 1980 and 1998. These breast cancer cases represent the largest series of women with prior normal breast tissue assembled to-date.</p>			
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## **Introduction**

A history of benign breast disease (BBD) is associated with an increase in risk of breast cancer, however risk differs according to the histological characteristics of BBD and other factors. Although histopathology can identify subsets of women with BBD at increased risk (e.g. women with atypical hyperplasia), few women fall into these high risk categories and most will not go on to develop breast cancer.

The aim of this pilot project is to establish a breast tissue repository that can be used in future studies of markers of breast cancer risk in normal breast tissue. To do this we will identify and retrieve the tissue specimens from women who are members of Group Health Cooperative (GHC) who underwent excisional breast biopsy with benign findings between 1980 and 1999. We will identify women who had a benign breast biopsy and later developed invasive breast cancer. We will also identify women who had a biopsy but did not develop cancer to serve as the control group.

Establishment of this tissue repository will lay a critical foundation for future studies of the pathogenesis of breast cancer. Ultimately, improved understanding of why some women are at increased risk for breast cancer will facilitate the development of new strategies for breast cancer prevention.

## **Body**

To date, we have identified 135 women with breast cancer who had a previous benign breast biopsy finding at Group Health Cooperative. We have retrieved the benign and malignant tissue specimens from 36 of these women. We are continuing to identify subjects for whom benign and malignant specimens still exist as well as identifying the control subjects who had benign findings but did not later develop breast cancer.

## **Key Research Accomplishments**

- 135 cases (women diagnosed with breast cancer who had prior benign breast biopsy identified).
- Benign and malignant specimens retrieved from 36 of these women.

## **Reportable Outcomes**

No reportable outcomes at this time.

## **Conclusions**

No reportable conclusions at this time.

## **References**

No applicable references for this report.

## **Appendices**

No appendices at this time.